

A high-performance demodulator for use in UWB (Ultra WideBand) multiple-access communication is disclosed. In a communication device, the correlation between a received signal corresponding to signals transmitted from a plurality of communication terminals by means of UWB (Ultra WideBand) communication and pulses at possible positions in a signal transmitted from each communication terminal is calculated. On the basis of the resultant calculated correlation, and taking into account interference among the signals transmitted from the communication terminals, the received signal is demodulated into original data issued by the respective communication terminals.